```
33
     eu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile
                    710
Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln
                725
                                     730
Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His
                                 745
Gly His Val Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro Val Pro
                             760
Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Ala Leu Gln Pro Val
Leu Arg Arg His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala Gly Arg
                                         795
Ala Ala Pro Ala Phe Gly Gly
                805
<210> 40
<211> 3396
<212> DNA
<213> Homo sapiens
<220>
<223> Reference Telomerase; with Intron Alpha and Beta
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atgeogege cteecegetg eegageegtg egeteeetge tgegeageea ctacegegag 60 gtgctgccgc tggccacgtt cgtgcggcgc ctggggcccc agggctggcg gctggtgcag 120 cgcggggacc cggcggcttt ccgcgcgctg gtggcccagt gcctggtgtg cgtgccctgg 180 gacgcacggc cgccccccgc cgccccctcc ttccgccagg tgtcctgcct gaaggagctg 240 qtqqcccqag tgctqcagag gctgtgcgag cgcggcgcga agaacgtgct ggccttcggc 300 ttegegetge tggaegggge cegeggggge ceeecegagg cetteaceae cagegtgege 360 agctacetge ccaacaeggt gacegaegca etgeggggga geggggegtg ggggetgetg 420 ttgcgccgcg tgggcgacga cgtgctggtt cacctgctgg cacgctgcgc gctctttgtg 480 ctggtggctc ccagctgcgc ctaccaggtg tgcgggccgc cgctgtacca gctcggcgct 540 gccactcagg cccggccccc gccacacgct agtggacccc gaaggcgtct gggatgcgaa 600 cgggcctgga accatagcgt cagggaggcc ggggtccccc tgggcctgcc agccccgggt 660 gcgaggaggc gcgggggcag tgccagccga agtctgccgt tgcccaagag gcccaggcgt 720 ggegetgece etgageegga geggaegece gttgggeagg ggteetggge ceaeceggge 780 aggacgcgtg gaccgagtga ccgtggtttc tgtgtggtgt cacctgccag acccgccgaa 840 gaagecacet etttggaggg tgegetetet ggeaegegee acteceacee atcegtggge 900 cgccagcacc acgcgggccc cccatccaca tcgcggccac cacgtccctg ggacacgcct 960 tgtccccgg tgtacgccga gaccaagcac ttcctctact cctcaggcga caaggagcag 1020 ctgcggccct ccttcctact cagctctctg aggcccagcc tgactggcgc tcggaggctc 1080 gtggagacca tctttctggg ttccaggccc tggatgccag ggactccccg caggttgccc 1140 cgcctgcccc agcgctactg gcaaatgcgg cccctgtttc tggagctgct tgggaaccac 1200 gcgcagtgcc cctacggggt gctcctcaag acgcactgcc cgctgcgagc tgcggtcacc 1260 ccagcagccg gtgtctgtgc ccgggagaag ccccagggct ctgtggcggc ccccgaggag 1320 gaggacacag accccqtcg cctggtgcag ctgctccgcc agcacagcag cccctggcag 1380 gtgtacggct tcgtgcgggc ctgcctgcgc cggctggtgc ccccaggcct ctggggctcc 1440 aggcacaacg aacgccgctt cctcaggaac accaagaagt tcatctccct ggggaagcat 1500 gccaagctct cgctgcagga gctgacgtgg aagatgagcg tgcggggctg cgcttggctg 1560

Gln His Leu Lys Arg Val Gln Leu Arg Glu Leu Ser Glu Ala Glu Val 635 630 Arg Gln His Arg Glu Ala Arg Pro Ala Leu Leu Thr Ser Arg Leu Arg 650 Phe Ile Pro Lys Pro Asp Gly Leu Arg Pro Ile Val Asn Met Asp Tyr Val Val Gly Ala Arg Thr Phe Arg Arg Glu Lys Arg Ala Glu Arg Leu Thr Ser Arg Val Lys Ala Leu Phe Ser Val Leu Asn Tyr Glu Arg Ala Arg Arg Pro Gly Leu Leu Gly Ala Ser Val Leu Gly Leu Asp Asp Ile 710 715 His Arg Ala Trp Arg Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Pro Glu Leu Tyr Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His Gly His Val Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro 790 785 Val Pro Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Ala Leu Gln 805 810 Pro Val Leu Arg Arg His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala 830

Gly Arg Ala Ala Pro Ala Phe Gly Gly 835 840

<210> 61

<211> 756

<212> PRT

<213> Homo sapiens

<220>

<223> Truncated Protein 2 (ver.2); encoded by SEQ ID NO:59 with Intron Y ORF2 after the termination codon

<400> 61

Gly Arg Pro Gly Gly Thr Ser Asp Met Arg Arg Ala Ala Gln Ala Thr 1 5 10 15

Gln Gly Ala Ser Pro Ala Gly Ser Cys Leu Lys Glu Leu Val Ala Arg

Thr Phe Val Leu Arg Val Arg Ala Gln Asp Pro Pro Glu Leu Tyr
645 650 655

Phe Val Lys Val Asp Val Thr Gly Ala Tyr Asp Thr Ile Pro Gln Asp 660 665 670

Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys Pro Gln Asn Thr Tyr 675 680 685

Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala Ala His Gly His Val 690 695 700

Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro Val Pro Gly Asp Pro 705 710 715 720

Ala Gly Leu His Pro Leu His Ala Ala Leu Gln Pro Val Leu Arg Arg
725 730 735

His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala Gly Arg Ala Ala Pro
740 745 750

Ala Phe Gly Gly 755

<210> 62

<211> 841

<212> PRT

<213> Homo sapiens

<220>

<223> Truncated Protein 2 (ver.2); encoded by SEQ ID NO:
 59 with Intron Y ORF3

<400> 62

Met Pro Arg Ala Pro Arg Cys Arg Ala Val Arg Ser Leu Leu Arg Ser 1 5 10 15

His Tyr Arg Glu Val Leu Pro Leu Ala Thr Phe Val Arg Arg Leu Gly
20 25 30

Pro Gln Gly Trp Arg Leu Val Gln Arg Gly Asp Pro Ala Ala Phe Arg 35 40 45

Ala Leu Val Ala Gln Cys Leu Val Cys Val Pro Trp Asp Ala Arg Pro 50 55 60

Pro Pro Ala Ala Pro Ser Phe Arg Gln Val Pro Pro Arg Gly Arg Arg 65 70 75 80

Pro Ala Gly Val Glu Gly Gly Arg Gly Glu Pro Ala Thr Cys Gly Glu 85 90 95

Gln Arg Arg Leu Arg Ala Leu Pro Pro Gln Val Ser Cys Leu Lys 100 105 110

Glu Leu Val Ala Arg Val Leu Gln Arg Leu Cys Glu Arg Gly Ala Lys 115 120 125 740 745 750

Thr Ile Pro Gln Asp Arg Leu Thr Glu Val Ile Ala Ser Ile Ile Lys
755 760 765

Pro Gln Asn Thr Tyr Cys Val Arg Arg Tyr Ala Val Val Gln Lys Ala 770 775 780

Ala His Gly His Val Arg Lys Ala Phe Lys Ser His Val Leu Arg Pro 785 790 795 800

Val Pro Gly Asp Pro Ala Gly Leu His Pro Leu His Ala Ala Leu Gln 805 810 815

Pro Val Leu Arg Arg His Gly Glu Gln Ala Val Cys Gly Asp Ser Ala 820 825 830

Gly Arg Ala Ala Pro Ala Phe Gly Gly 835 840

<210> 63

<211> 3500

<212> DNA

<213> Homo sapiens

<220>

<223> Reference Protein (ver.2); with Introns Y, Alpha
and Beta

<400> 63 atgccgcgcg ctccccgctg ccgagccgtg cgctccctgc tgcgcagcca ctaccgcgag 60 qtqctqccqc tgqccacgtt cgtgcggcgc ctggggcccc agggctggcg gctggtgcag 120 cgcggggacc cggcggcttt ccgcgcgctg gtggcccagt gcctggtgtg cgtgccctgg 180 gacgcacggc cgccccccgc cgccccctcc ttccgccagg tgggcctccc cggggtcggc 240 gtccggctgg ggttgagggc ggccgggggg aaccagcgac atgcggagag cagcgcaggc 300 gactcagggc gcttcccccg caggtgtcct gcctgaagga gctggtggcc cgagtgctgc 360 agaggctgtg cgagcgcggc gcgaagaacg tgctggcctt cggcttcgcg ctgctggacg 420 gggcccgcgg gggccccccc gaggccttca ccaccagcgt gcgcagctac ctgcccaaca 480 cggtgaccga cgcactgcgg gggagcgggg cgtgggggct gctgttgcgc cgcgtgggcg 540 acgacgtgct ggttcacctg ctggcacgct gcgcgctctt tgtgctggtg gctcccagct 600 gegectacca ggtgtgeggg cegeegetgt accagetegg egetgeeact caggeeegge 660 ccccgccaca cgctagtgga ccccgaaggc gtctgggatg cgaacgggcc tggaaccata 720 gcgtcaggga ggccggggtc cccctgggcc tgccagcccc gggtgcgagg aggcgcgggg 780 gcagtgccag ccgaagtctg ccgttgccca agaggcccag gcgtggcgct gcccctgagc 840 cggagcggac gcccgttggg caggggtcct gggcccaccc gggcaggacg cgtggaccga 900 gtgaccgtgg tttctgtgtg gtgtcacctg ccagacccgc cgaagaagcc acctctttgg 960 agggtgcgct ctctggcacg cgccactccc acccatccgt gggccgccag caccacgcgg 1020 geoceccate cacategogg coaccaegte cetgggacae geettgteec ceggtgtaeg 1080 ccgagaccaa gcacttcctc tactcctcag gcgacaagga gcagctgcgg ccctccttcc 1140 tactcagete tetgaggeee ageetgactg gegeteggag getegtggag accatettte 1200 tgggttccag gccctggatg ccagggactc cccgcaggtt gccccgcctg ccccagcgct 1260 actggcaaat geggeeeetg tttetggage tgettgggaa eeaegegeag tgeeeetaeg 1320 gggtgctcct caagacgcac tgcccgctgc gagctgcggt caccccagca gccggtgtct 1380 qtqcccqgga gaagccccag ggctctgtgg cggcccccga ggaggaggac acagaccccc 1440 gtcgcctggt gcagctgctc cgccagcaca gcagcccctg gcaggtgtac ggcttcgtgc 1500 qqqcctqcct qcgccgqctg gtgcccccag gcctctgggg ctccaggcac aacgaacgcc 1560 getteeteag qaacaccaag aagtteatet eeetggggaa geatgeeaag etetegetge 1620